YAMAHA

RX-V480

Natural Sound Stereo Receiver

Récepteur stéréo "Son Naturel"

Natural Sound Stereoreceiver

Natural Sound Stereoreceiver

Sintonizzatore stereo a suono naturale

Receptor estéreo de Sonido Natural

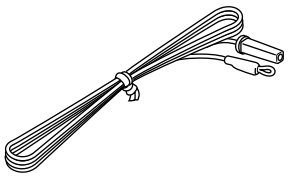
Natural Sound Stereo Ontvanger

OWNER'S MANUAL
MODE D'EMPLOI
BEDIENUNGSANLEITUNG
BRUKSANVISNING
MANUALE DI ISTRUZIONI
MANUAL DE INSTRUCCIONES
GEBRUIKSAANWIJZING

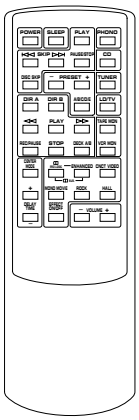
SUPPLIED ACCESSORIES
ACCESSOIRES FOURNIS
MITGELIEFERTE ZUBEHÖRTEILE
MEDFÖLJANDE TILLBEHÖR
ACCESSORI IN DOTAZIONE
ACCESORIOS INCLUIDOS
BIJGELEVERDE ACCESSOIRES

- After unpacking, check that the following parts are included.
- Après le déballage, vérifier que les pièces suivantes sont incluses.
- Nach dem Auspacken überprüfen, ob die folgenden Teile vorhanden sind.
- Kontrollera efter det apparaten packats upp att följande delar finns med.
- Verificare che tutte le parti seguenti siano contenute nell'imballaggio dell'apparecchio.
- Desembale el aparato y verificar que los siguientes accesorios están en la caja.
- Controleer na het uitpakken of de volgende onderdelen voorhanden zijn.

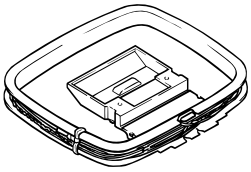
- Indoor FM Antenna
- Antenne FM intérieure
- UKW-Innenantenne
- FM inomhusantenn
- Antenna FM per interni
- Antena FM interior
- FM Binnenantenne



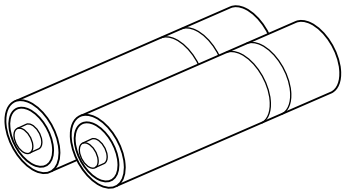
- Remote Control Transmitter
- Emetteur de télécommande
- Fernbedienungsgeber
- Fjärrkontrollsändare
- Telecomando
- Transmisor del control remoto
- Afstandbediening



- AM Loop Antenna
- Cadre-antenna AM
- MW-Rahmenantenne
- AM ramantenn
- Antenna AM ad anello
- Antena de cuadro de AM
- AM Lusantenne



- Batteries (size AA, R6, UM-3)
- Piles (taille AA, R6, UM-3)
- Batterien (Größe AA, R6, UM-3)
- Batterier (storlek AA, R6, UM-3)
- Batterie (dimensioni AA, R6, UM-3)
- Pilas (tamaño AA, R6, UM-3)
- Batterijen (maat AA, R6, UM-3)



This product complies with the radio frequency interference requirements of the Council Directive 82/499/EEC and/or 87/308/EEC.

Cet appareil est conforme aux prescriptions de la directive communautaire 87/308/CEE.

Diese Geräte entsprechen der EG-Richtlinie 82/499/EWG und/oder 87/308/EWG.

Dette apparat overholder det gaeldende EF-direktiv vedrørende radiostøj.

Questo apparecchio è conforme al D.M.13 aprile 1989 (Direttiva CEE/87/308) sulla soppressione dei radiodisturbi.

Este producto está de acuerdo con los requisitos sobre interferencias de radio frequencia fijados por el Consejo Directivo 87/308 CEE.

Dit product voldoet aan de EEG normen betreffende radio-frekwentie storingen 82/499/EEG en/of 87/308/EEG.

Thank you for selecting this YAMAHA stereo receiver.

FEATURES

- **5 Speaker Configuration**
  Front: (U.S.A. model)
  65W + 65W (8Ω) RMS Output Power, 0.04% THD, 20–20,000 Hz
  (Canada model)
  55W + 55W (8Ω) RMS Output Power, 0.04% THD, 20–20,000 Hz
  (Australia, Europe, U.K. and General models)
  60W + 60W (8Ω) RMS Output Power, 0.04% THD, 20–20,000 Hz
  Center: (U.S.A. model)
  65W (8Ω) RMS Output Power, 0.1% THD, 1 kHz
  (Canada model)
  55W (8Ω) RMS Output Power, 0.1% THD, 1 kHz
  (Australia, Europe, U.K. and General models)
  60W (8Ω) RMS Output Power, 0.1% THD, 1 kHz
  Rear: 15W + 15W (8Ω) RMS Output Power, 0.7% THD, 1 kHz
- **Digital Sound Field Processor**
  4 Programs for Digital Sound Field Processing
  2 Programs Dolby Surround (DOLBY PRO LOGIC and DOLBY PRO LOGIC ENHANCED)
- **Automatic Input Balance Control for Dolby Surround**
- **Test Tone Generator for Easier Speaker Output Balance Adjustment**
- **3 Center Channel Modes (NORMAL/WIDE/PHANTOM)**
- **40-Station Random Preset Tuning**
- **Automatic Preset Tuning**
- **Preset Station Shifting Capability**
- **IF Count Direct PLL Synthesizer Tuning System**
- **Video Signal Input/Output Capability**
- **SLEEP Timer**
- **Remote Control Capability**

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CAUTION : READ THIS BEFORE OPERATING YOUR UNIT.

1. To assure the finest performance, please read this manual carefully. Keep it in a safe place for future reference.
2. Install this unit in a cool, dry, clean place – away from windows, heat sources, sources of excessive vibration, dust, moisture and cold. Avoid sources of humming (transformers, motors). To prevent fire or electrical shock, do not expose the unit to rain or water.
3. Never open the cabinet. If something drops into the set, contact your dealer.
4. Do not use force on switches, controls or connection wires. When moving the unit, first disconnect the power plug and the wires connected to other equipment. Never pull the wires themselves.
5. The openings on the cabinet assure proper ventilation of the unit. If these openings are obstructed, the temperature inside the cabinet will rise rapidly and eventually damage the circuits. Therefore, avoid placing objects against these openings and do not install the unit where the flow of air through the ventilation openings could be impeded.
6. Always set the VOLUME control to "– ∞" before starting the audio source play. Increase the volume gradually to an appropriate level after playback has been started.
7. Do not attempt to clean the unit with chemical solvents; this might damage the finish. Use a clean, dry cloth.
8. Be sure to read the "TROUBLESHOOTING" section regarding common operating errors before concluding that the unit is faulty.
9. When not planning to use this unit for long periods of time (ie., vacation, etc.), disconnect the AC power plug from the wall outlet.
10. To prevent lightning damage, disconnect the AC power plug and disconnect the antenna cable when there is an electrical storm.
11. Grounding or polarization – Precautions should be taken so that the grounding or polarization of an appliance is not defeated.
12. AC outlet
    Do not connect audio equipment to the AC outlet on the rear panel if that equipment requires more power than the outlet is rated to provide.
13. **Voltage Selector (General Model only)**
    The voltage selector on the rear panel of this unit must be set for your local main voltage BEFORE plugging into the AC main supply.
    Voltages are 110/120/220/240V AC, 50/60 Hz.

IMPORTANT
Please record the serial number of this unit in the space below.

Serial No.:

The serial number is located on the rear of the unit.
Retain this Owner's Manual in a safe place for future reference.

WARNING
TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.

CAUTION (FOR CANADA MODEL)
TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT AND FULLY INSERT.

FOR CANADIAN CUSTOMERS
THIS DIGITAL APPARATUS DOES NOT EXCEED THE "CLASS B" LIMITS FOR RADIO NOISE EMISSIONS FROM DIGITAL APPARATUS SET OUT IN THE RADIO INTERFERENCE REGULATIONS OF THE CANADIAN DEPARTMENT OF COMMUNICATIONS.

The apparatus is not disconnected from the AC power source as long as it is connected to the wall outlet, even if the apparatus itself is turned off.

For U.K. customers

If the socket outlets in the home are not suitable for the plug supplied with this appliance, it should be cut off and an appropriate 3 pin plug fitted. For details, refer to the instructions described below.
Note: The plug severed from the mains lead must be destroyed, as a plug with bared flexible cord is hazardous if engaged in a live socket outlet.

Special Instructions for U.K. Model

IMPORTANT
THE WIRES IN THE MAINS LEAD ARE COLOURED IN ACCORDANCE WITH THE FOLLOWING CODE:

Blue: NEUTRAL
Brown: LIVE

As the colours of the wires in the main lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:
The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured BLACK. The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured RED. Make sure that neither core is connected to the earth terminal of the three pin plug.

FREQUENCY STEP switch (General Model only)
Because the interstation frequency spacing differs in different areas, set the FREQUENCY STEP switch (located at the rear) according to the frequency spacing in your area.
Before setting this switch, disconnect the AC power plug of this unit from the AC outlet.

PROFILE OF THIS UNIT

You are the proud owner of a Yamaha stereo receiver –an extremely sophisticated audio component. The Digital Sound Field Processor (DSP) built into this unit takes full advantage of Yamaha's undisputed leadership in the field of digital audio processing to bring you a whole new world of listening experiences. Follow the instructions in this manual carefully when setting up your system, and this unit will sonically transform your room into a wide range of listening environments –movie theater, concert hall, and so on. In addition, you get incredible realism from Dolby-encoded video sources using the built-in Dolby Pro Logic Surround Decoder. Rather than tell you about the wonders of digital sound field processing, however, let's get right down to the business of setting up the system and trying out its many capabilities. Please read this operation manual carefully and store it in a safe place for later reference.

Digital Sound Field Processing

What is it that makes live music so good? Today's advanced sound reproduction technology lets you get extremely close to the sound of a live performance, but chances are you'll still notice something missing: the acoustic environment of the live concert hall. Extensive research into the exact nature of the sonic reflections that create the ambience of a large hall has made it possible for Yamaha engineers to bring you this same sound in your own listening room, so you'll feel all the sound of a live concert.

What's more, our technicians, armed with sophisticated measuring equipment, have even made it possible to capture the acoustics of a variety of venues such as an actual concert hall, theater, etc. to allow you to accurately recreate one of several actual live performance environments, all in your own home.

Dolby Pro Logic Surround

The Dolby Pro Logic Surround Decoder program lets you experience the dramatic realism and impact of Dolby Surround movie theater sound in your own home. Dolby Pro Logic gets its name from its professional-grade steering logic circuitry, which provides greater effective channel separation for a much higher degree of realism than the "passive" Dolby Surround circuits found in today's typical home audio/video equipment. Dolby Pro Logic Surround provides a true center channel, so that there are four independent channels, unlike passive Dolby Surround which has in effect only three channels: left, right, and rear. This center channel allows listeners seated in even less-than-ideal positions to hear the dialog originating from action on the screen while getting a stereo effect as well.

This Dolby Pro Logic Surround Decoder employs a digital signal processing system. This system increases sound stability at each channel and minimizes crosstalk between channels compared to conventional analog Dolby signal processing.
In addition, this unit features a built-in automatic input balance control. This circuit always presents you the best surround conditions without performing manual adjustments.

Dolby Pro Logic Surround + DSP

You can also enjoy a combination of Dolby Pro Logic Surround and DSP in the sound field program " PRO LOGIC ENHANCED".
It recreates the surround effect of a movie theater, effectively duplicating its multiple surround loudspeaker system, completely surrounding the listener with the sounds of the action taking place on the screen.

SPEAKER SETTING UP FOR THIS UNIT

SPEAKERS TO BE USED

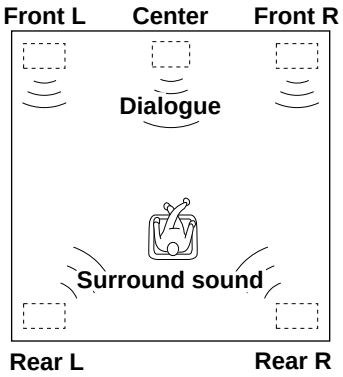
This unit is designed to provide the best sound-field quality with a 5 speaker configuration. The speakers to be used with this unit will be mainly front speakers, rear speakers, and a center speaker. (You can omit the center speaker. Refer to the "**4-Speaker Configuration**" shown below.)
The front speakers are used for the output of the main source sound and the effect sound. They will probably be the speakers of your present stereo speaker system. The rear speakers are used for the output of the effect sound. And the center speaker is used for the output of the center sound (dialog etc.) encoded with the Dolby Surround. The rear and center speakers do not need to be equal in power to the front speakers. However, all the speakers should have high enough power handling to accept the maximum output of this unit.

SPEAKER CONFIGURATION

5-Speaker Configuration

This configuration is the most effective and is the one that is recommended. In this configuration, the center speaker is necessary as well as the rear speakers. If the digital sound field program is in **DOLBY PRO LOGIC** or **DOLBY PRO LOGIC ENHANCED** mode conversations will be output from the center speaker and the ambience will be excellent.

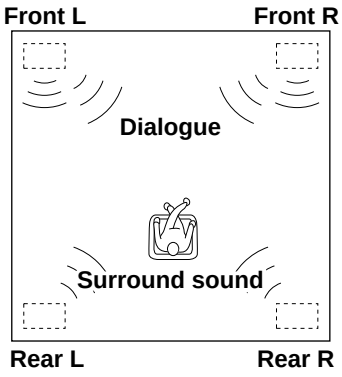
- Set the center mode to the "**NORMAL**" or "**WIDE**" position. (For details, refer to page 11.)



4-Speaker Configuration

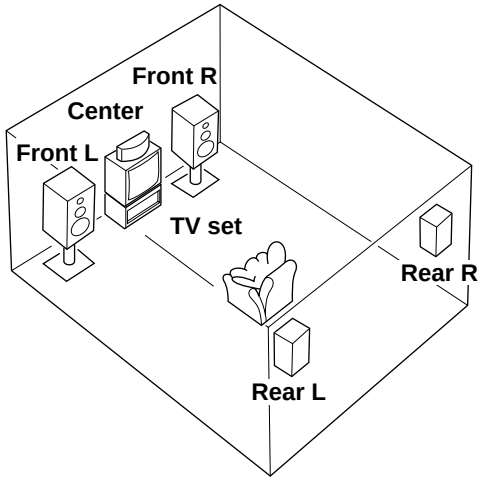
The center speaker is not used in this configuration. If the digital sound field program is in the **DOLBY PRO LOGIC** or **DOLBY PRO LOGIC ENHANCED** mode, the center sound is output from the left and the right front speakers. However, the sound effect of other programs can be the same as that of the 5-speaker configuration.

- Be sure to set the center mode to the "**PHANTOM**" position. (For details, refer to page 11.)



SPEAKER PLACEMENT

The recommanded speaker configuration, the 5-speaker configuration, will require two speaker pairs: **front speakers** (your normal stereo speakers), and **rear speakers**, plus a **center speaker**. When you place these speakers, refer to the following.



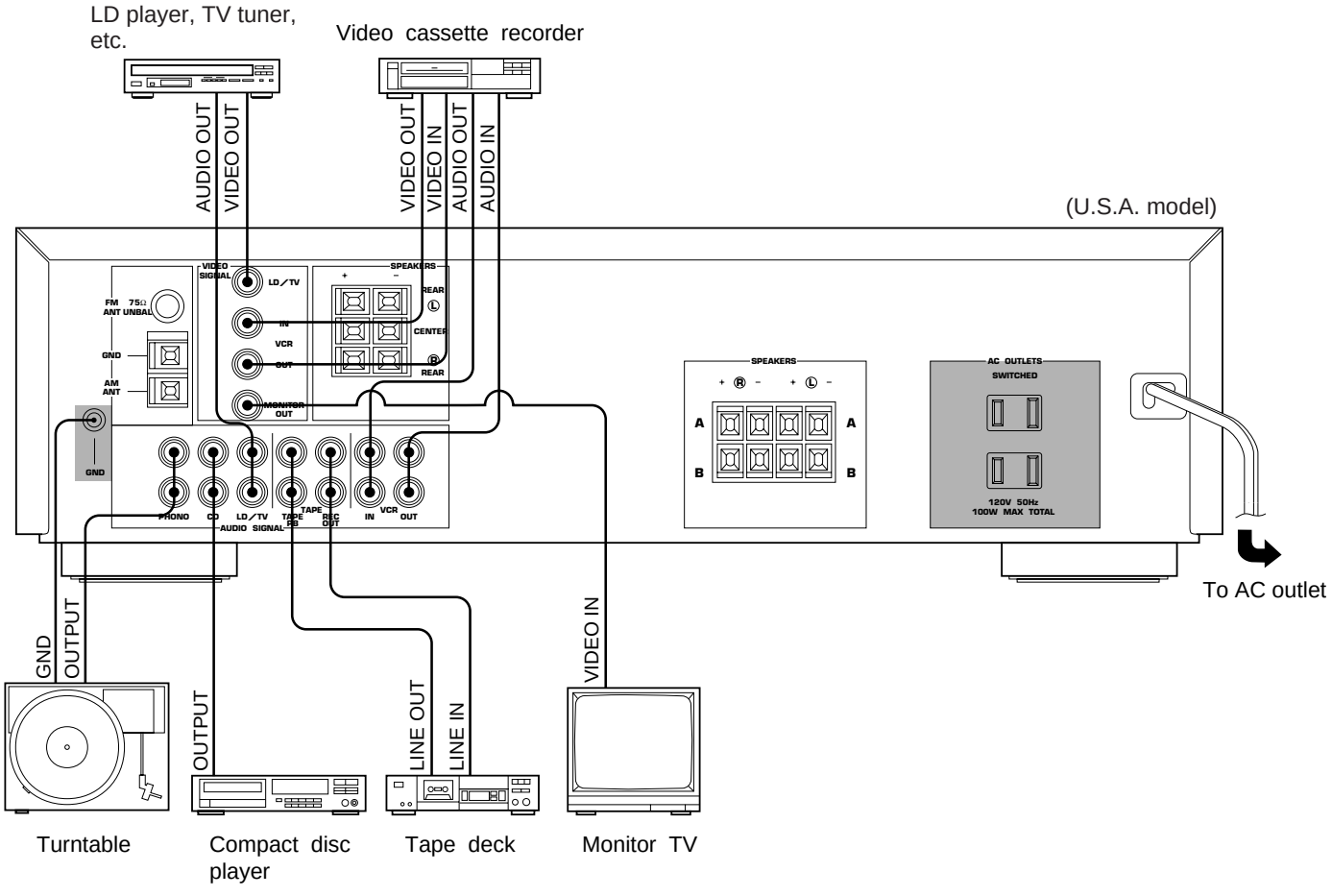
Front: In normal position. (The position of your present stereo speaker system.)
Rear: Behind your listening position, facing slightly inward. Nearly six feet (approx. 1.8 m) up from the floor.
Center: Precisely between the front speakers. (To avoid interference with TV sets, use a magnetically shielded speaker. If, however, it is not effective, keep the speaker away from TV sets.)

CONNECTIONS

Before attempting to make any connections to or from this unit, be sure to first switch OFF the power to this unit and to any other components to which connections are being made.

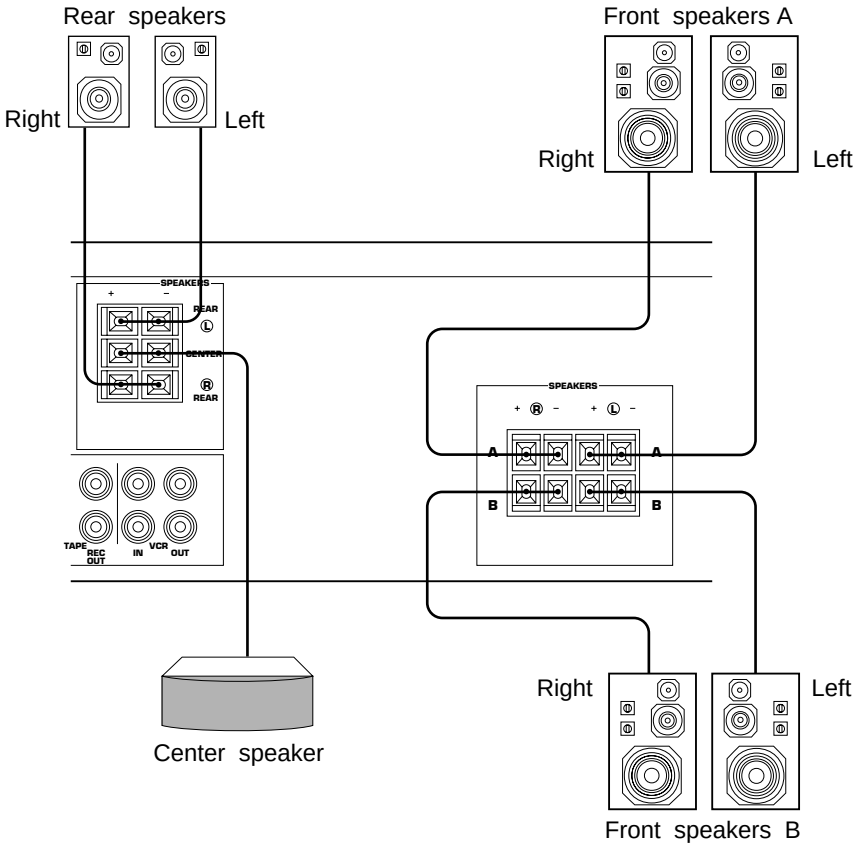
CONNECTIONS WITH OTHER COMPONENTS

When making connections between this unit and other components, be sure all connections are made correctly, that is to say **L** (left) to **L**, **R** (right) to **R**, "+" to "+" and "–" to "–". Also, refer to the owner's manual for each component to be connected to this unit.



: Refer to "**ABOUT THE ACCESSORY TERMINALS**" on page 8.

CONNECTING SPEAKERS

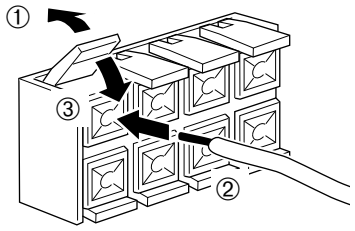


Connect the **SPEAKERS** terminals to your speakers with wire of the proper gauge, cut to be as short as possible. If the connections are faulty, no sound will be heard from the speakers. Make sure that the polarity of the speaker wires is correct, that is, + and – markings are observed. If these wires are reversed, the sound will be unnatural and will lack bass.
Do not let the bare speaker wires touch each other and do not let them touch the metal parts of this unit as this could damage this unit and/or speakers.

- Use speakers with the specified impedance shown on the rear of this unit.
- **Note for front speaker connection:**
  One or two speaker systems can be connected to this unit. If you connect only one speaker system, connect it to either the **SPEAKERS A** or **B** terminals.

How to Connect:

Red: positive (+)
Black: negative (–)



① Press up the tab.
② Insert the bare wire. [Remove approx. 5mm (1/4") insulation from the speaker wires.]
③ Press down the tab and secure the wire.

ABOUT THE ACCESSORY TERMINALS

AC OUTLET(S)

(U.S.A., Canada, Europe and General models)
.....2 SWITCHED OUTLETS
(Australia and U.K. models)
..... 1 SWITCHED OUTLET
Use these to connect the power cords from your components to this unit.
The power to the **SWITCHED** outlets is controlled by this unit's **POWER** switch or the provided remote-control transmitter's **POWER** key. These outlets will supply power to any component whenever this unit is turned on.

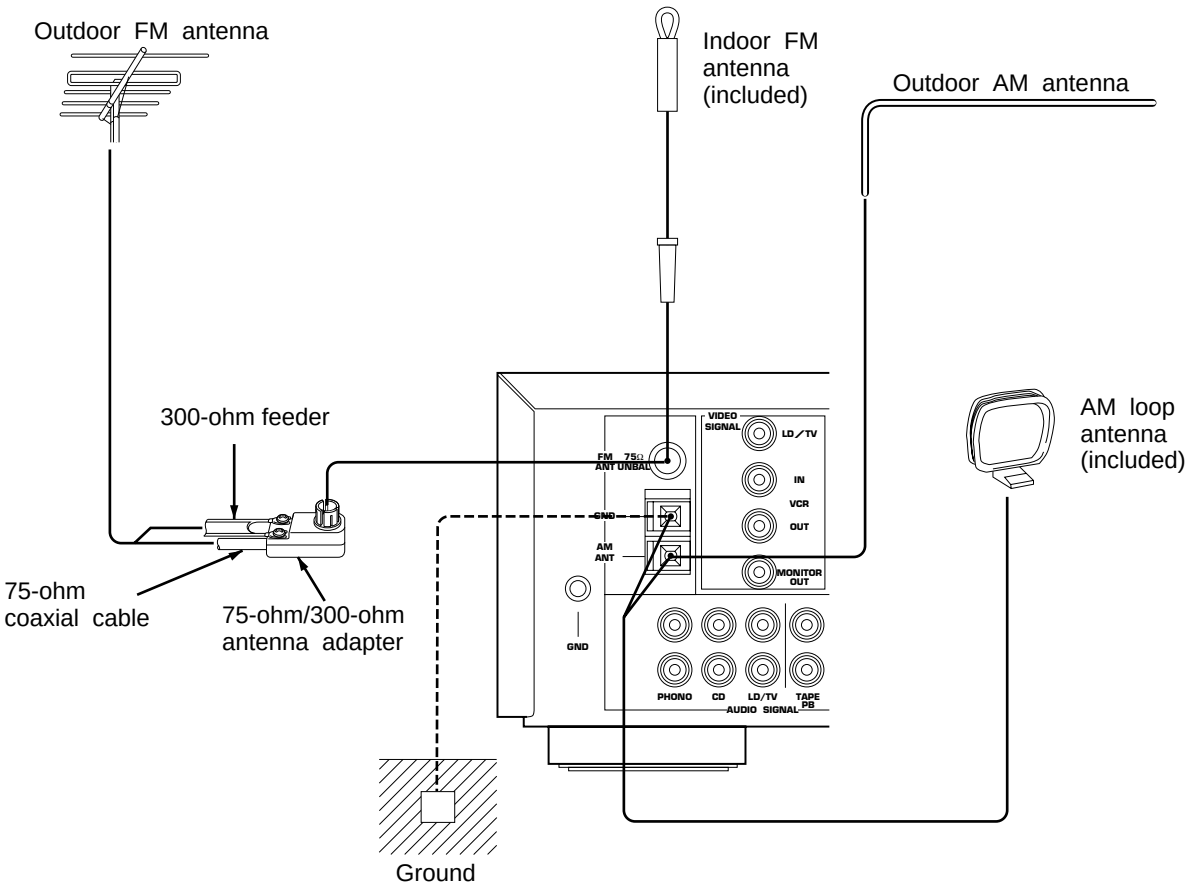
The maximum power (total power consumption of components) that can be connected to the **SWITCHED AC OUTLET(S)** is 100 watts.

GND terminal (For turntable use)

Connecting the ground wire of the turntable to this terminal will minimize hum, but in some cases better results may be obtained with the ground wire disconnected.

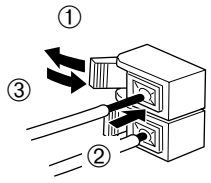
ANTENNA CONNECTIONS

- Each antenna should be connected to the designated terminals correctly, referring to the following figure.
- Both AM and FM indoor antennas are included with this unit. In general, these antennas will probably provide sufficient signal strength. Nevertheless, a properly installed outdoor antenna will give clearer reception than an indoor one. If you experience poor reception quality, an outdoor antenna may result in improvement.

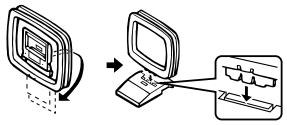


Connecting the AM loop antenna

1



2



3

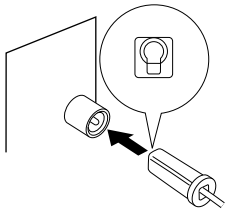
Orient so that the best reception is obtained.

* The AM loop antenna should be placed apart from the main unit. The antenna may be hung on a wall.
* The AM loop antenna should be kept connected, even if an outdoor AM antenna is connected to this unit.

GND terminal

For maximum safety and minimum interference, connect the **GND** terminal to a good earth ground. A good earth ground is a metal stake driven into moist earth.

Notes

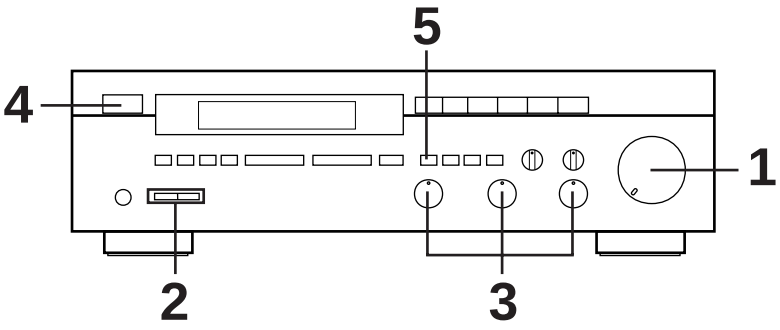


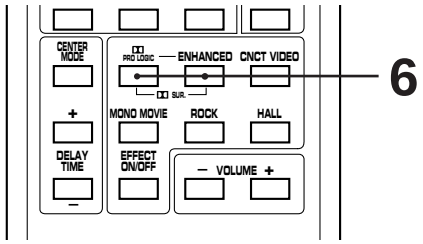
- When connecting the indoor FM antenna, make sure that the grooved part of the connector hole is facing downward.
- If you need an outdoor FM antenna to improve FM reception quality, either 300-ohm feeder or coaxial cable may be used. In locations troubled by electrical interference, coaxial cable is preferable.

ADJUSTMENT BEFORE OPERATION

Speaker balance adjustment

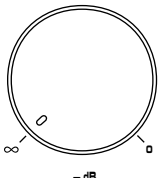
This procedure lets you adjust the sound output level balance between the front, center, and rear speakers using the built-in test tone generator. With this adjustment, the sound output level heard at the listening position will be the same from each speaker. This is important for the best performance of the digital sound field processor.





1

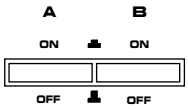
VOLUME



Set to the " ∞ " position.

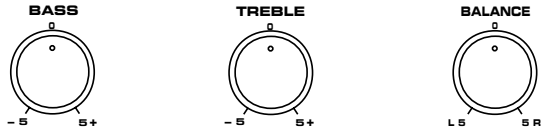
2 Select the front speakers to be used.

SPEAKERS



* If you use two front speaker systems, press both the A and B switches.

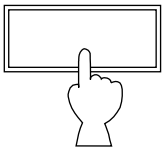
3



Set to the "0" position.

4

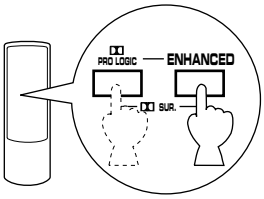
POWER

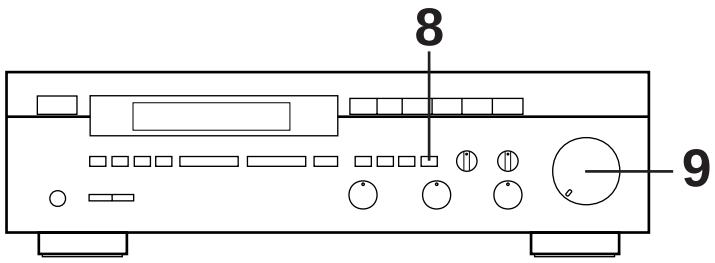


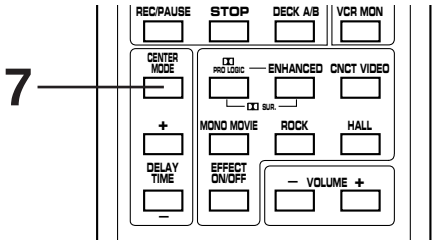
5 Turn the DSP on, so that a DSP program name appears on the display.

EFFECT

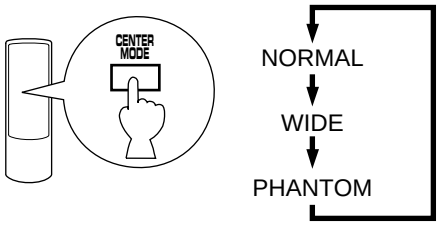
6 Select the PRO LOGIC or PRO LOGIC ENHANCED mode, so that the corresponding name is illuminated on the display.







7 Select the center channel output mode according to your speaker configuration.
(Refer to "**SPEAKER CONFIGURATION**" on page 6.)



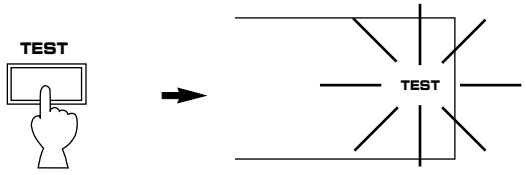
On the feature of each mode, refer to the "**Note**" shown below.

Note
In step 7, when you select the center channel output mode, note the following.

For 5 speaker configuration)
NORMAL: Select this mode when you use a center speaker that is smaller than the front speakers. In this mode, the bass tone will be output from the front speakers.
WIDE: Select this mode when you use the center speaker approximately same sized as the front speakers.

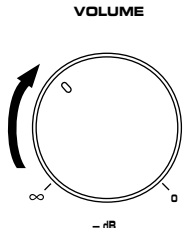
For 4 speaker configuration)
PHANTOM: Select this mode when you do not use the center speaker. The center sound will be output from the left and right front speakers.

8

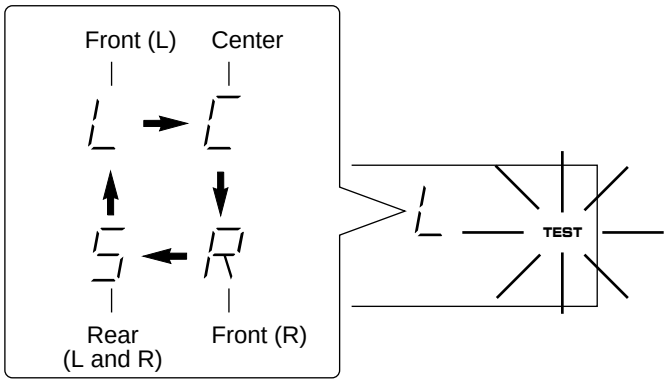


Flashes continuously.

9 Turn up the volume.

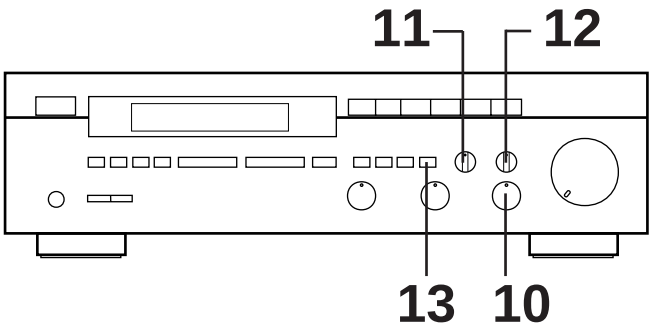


You will hear a test tone (like pink noise) from the left front speaker, then the center speaker, then the right front speaker, and then the rear speakers, for about two seconds each. The display changes as shown below.

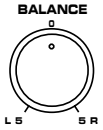


* The test tone from the left rear speaker and the right rear speaker will be heard at the same time.

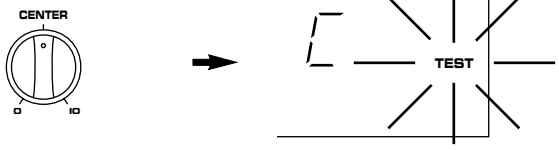
CONTINUED



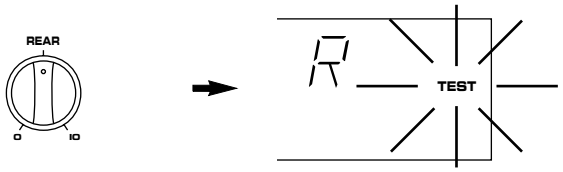
10 Adjust the **BALANCE** control so that the effect sound output level of the left front speaker and the right front speaker are the same.



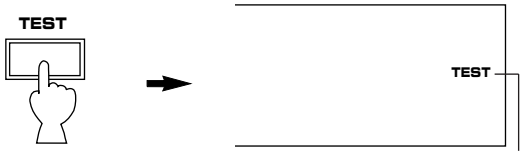
11 Make the sound output level of the center speaker the same as that of the front speakers with the **CENTER** level control.



12 Make the sound output level of the rear speakers the same as that of the front speakers with the **REAR** level control.



13 Cancel the test tone.

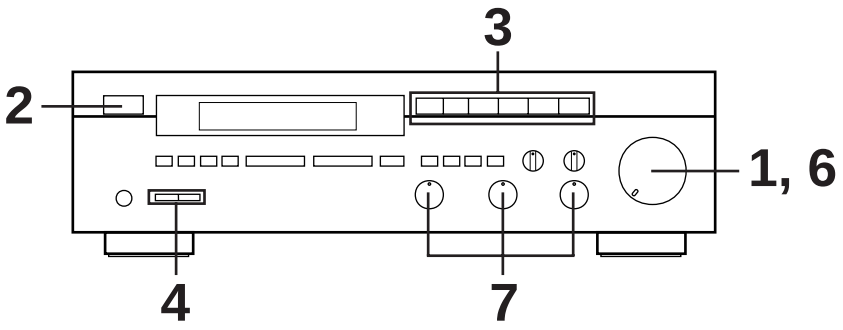


Stops flashing and disappears.

Notes

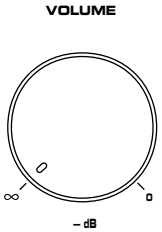
- Once you have completed these adjustments, you can adjust whole sound level on your audio system by using the **VOLUME** control (or the **VOLUME** keys on the remote control transmitter).
- If you use external power amplifiers, their volume controls may also be adjusted to achieve proper balance.
- In step 11, if the center mode is in the "**PHANTOM**" position, the sound output level of the center speaker can not be adjusted. This is because in this mode, the center sound is automatically output from the left and right front speakers.

OPERATIONS



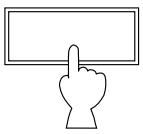
TO PLAY A SOURCE

1

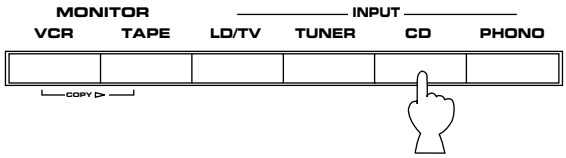


Set to the " ∞ " position.

2

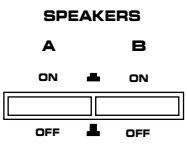


3 Select the desired input source by using the input selector switches.
(For video sources, turn the TV/monitor ON.)



* The name of the selected input source will appear in the display.

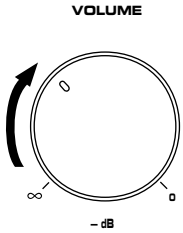
4 Select the front speakers to be used.



* If you use two front speaker systems, press both the A and B switches.

5 Play the source. (For detailed information on the tuning operation, refer to the page 16.)

6



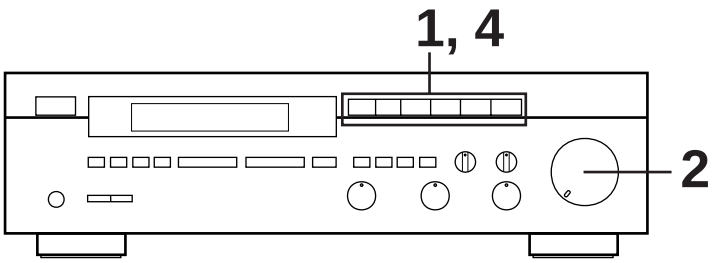
Adjust to the desired output level.

7 If desired, adjust the **BASS, TREBLE, BALANCE** controls, etc. (refer to the page 15) and use the digital sound field processor. (Refer to the page 20.)

Note

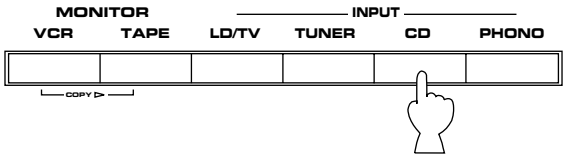
In step 3, if two or more program sources are selected at the same time (by using the input selector switches), be sure to remember the priority order of the input sources.
Priority order of sources: 1) **TAPE**, 2) **VCR**, 3) **LD/TV**, **TUNER**, **CD** or **PHONO**.

- If you select **LD/TV**, **TUNER**, **CD** or **PHONO**, be sure that neither **TAPE** nor **VCR** have been selected.
- If you select **TAPE** and **VCR** and another input selector switch at the same time, the playback result will be the video image from the VCR and the sound from the audio tape.
- If you select both **LD/TV** and **TAPE** at the same time, the playback result will be the video image from the LD player and the sound from the audio tape.
- Once you play the LD player, its video image will not be interrupted even if other input selector switches except **VCR** are selected.
- For **TAPE** and **VCR**, whenever the switch is pressed, the corresponding input source is selected or canceled alternately.



TO RECORD A SOURCE TO TAPE

1 Select the source to be recorded.

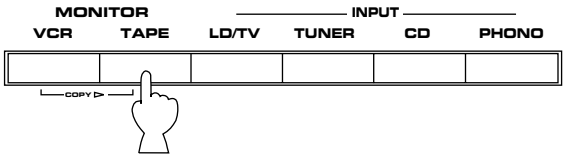


* To dub from tape to tape, refer to the "**Notes**" shown at right.
* When you select **LD/TV**, **TUNER**, **CD** or **PHONO**, make sure that neither **TAPE** nor **VCR** is also selected.

2 Play the source and then turn the **VOLUME** control up to confirm the input source. (For detailed information on the tuning operations, refer to the page 16.)

3 Set the tape deck or VCR to the recording mode.

4 To monitor the audio and/or video signals being recorded, press the input selector switch for the audio or video tape recorder being used to make the recording.



Notes

- To dub from tape to tape, only the following method of dubbing can be performed.

SOURCE		RECORDER
VCR (or tape deck) connected to the VCR terminals.	→	Tape deck connected to the TAPE terminals.

- **DSP**, **VOLUME**, **BASS**, **TREBLE** and **BALANCE** control settings have no effect on the material being recorded.